

SHUSAKU YAMAMOTO

Reference +

VOP

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 09-036102

(43)Date of publication of application : 07.02.1997

(51)Int.Cl.

H01L 21/3063

C23C 16/50

C23F 4/00

G01J 3/42

G01N 21/35

H01L 21/205

H01L 21/304

H01L 21/31

H05H 1/46

(21)Application number : 08-116077

(71)Applicant : MATSUSHITA ELECTRIC IND CO LTD

(22)Date of filing : 10.05.1996

(72)Inventor : ERIGUCHI KOUJI

(30)Priority

Priority number : 07118383

Priority date : 17.05.1995

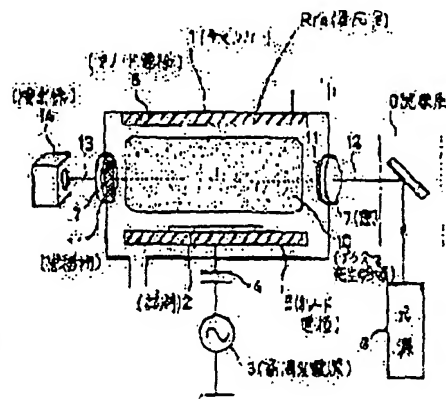
Priority country : JP

**(54) MONITORING METHOD OF DEPOSITE IN CHAMBER, PLASMA PROCESSING METHOD, DRY-CLEANING METHOD AND SEMICONDUCTOR MANUFACTURING DEVICE**

(57)Abstract:

PROBLEM TO BE SOLVED: To improve the process control when a machining work is conducted utilizing the plasma such as dry etching and plasma CAD, etc.

SOLUTION: For example, the coupling between the specific atoms, contained in a deposit 11 on the inner wall surface of the chamber 1 formed by the by product of etching, is observed using Infrared rays in a dry etching process for example. The Incident Infrared rays 12, generated by a monitoring light source 8, is made to irradiate on the deposit 11, and suction spectrum of passing infrared rays 13, which passed the deposit 11, are detected by an infrared detector 14. As a result, the correct information in the chamber 1 can be obtained, and the irregularity of etching characteristics and the lowering of the yield rate caused by the generation of particles can be prevented. Also, the operating efficiency of the device can be improved by optimizing the period of maintenance based on the amount of specific change of the respective Infrared ray spectrum.



**SHUSAKU YAMAMOTO****LEGAL STATUS**

[Date of request for examination] 10.05.1996

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number] 2781545

[Date of registration] 15.05.1998

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office